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Range: from **begin** to **end** Features: SNP CDD MGC HPRD STS tRN

1: [Q62751](#). Reports Iron-responsive e...[gi:60392492]

BLink, Conserved Domains, Links

Comment Features Sequence

LOCUS Q62751 963 aa linear ROD 01-NOV-1997
 DEFINITION Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2).
 ACCESSION Q62751
 VERSION Q62751 GI:60392492
 DBSOURCE swissprot: locus IREB2_RAT, accession [Q62751](#);
 class: standard.
 extra accessions:Q66HL4,xrefs: [U20181.1](#), [AAA79927.1](#), [BC081798.1](#),
[AAH81798.1](#)
 xrefs (non-sequence databases): UniGene:Rn.10132,
 Ensembl:ENSRNOG00000013271, RGD:621539, LinkHub:Q62751,
 InterPro:IPR012084, InterPro:IPR006249, InterPro:IPR000573,
 InterPro:IPR001030, Pfam:PF00330, Pfam:PF00694, PIRSF:PIRSF001417,
 PRINTS:PR00415, ProDom:PD000511, TIGRFAMs:TIGR01341,
 PROSITE:PS00450, PROSITE:PS01244
 KEYWORDS 4Fe-4S; Iron; Iron-sulfur; Metal-binding; RNA-binding.
 SOURCE *Rattus norvegicus* (Norway rat)
 ORGANISM [Rattus norvegicus](#)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
 Sciurognathi; Muroidea; Muridae; Murinae; *Rattus*.
 REFERENCE 1 (residues 1 to 963)
 AUTHORS Guo, B., Brown, F.M., Phillips, J.D., Yu, Y. and Leibold, E.A.
 TITLE Characterization and expression of iron regulatory protein 2 (IRP2). Presence of multiple IRP2 transcripts regulated by intracellular iron levels
 JOURNAL *J. Biol. Chem.* 270 (28), 16529-16535 (1995)
 PUBMED [7622457](#)
 REMARK NUCLEOTIDE SEQUENCE [MRNA].
 STRAIN=Sprague-Dawley; TISSUE=Liver
 REFERENCE 2 (residues 1 to 963)
 AUTHORS .
 CONSRM NIH - Mammalian Gene Collection (MGC) project
 TITLE Direct Submission
 JOURNAL Submitted (??-SEP-2004)
 REMARK NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
 TISSUE=Testis
 COMMENT On Mar 1, 2005 this sequence version replaced gi:[2492646](#).
 [FUNCTION] Binds to iron-responsive elements (IRES), which are stem-loop structures found in the 5'UTR of ferritin, and delta aminolevulinic acid synthase mRNAs, and in the 3'UTR of transferrin receptor mRNA. Binding to the IRE element in ferritin results in

the repression of its mRNA translation. Binding of the protein to the transferrin receptor mRNA inhibits the degradation of this otherwise rapidly degraded mRNA.

[COFACTOR] Binds 1 4Fe-4S cluster per subunit (By similarity).

[SUBCELLULAR LOCATION] Cytoplasm.

[TISSUE SPECIFICITY] Ubiquitously expressed in rat tissues, the highest amounts present in skeletal muscle and heart.

[SIMILARITY] Belongs to the aconitase/IPM isomerase family.

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| <u>gene</u> | 1..963 /gene="Ireb2" /note="synonym: Irp2" |
| <u>Protein</u> | 1..963 /gene="Ireb2" /product="Iron-responsive element-binding protein 2" |
| <u>Region</u> | 1..963 /gene="Ireb2" /region_name="Mature chain" /experiment="experimental evidence, no additional details recorded" /note="Iron-responsive element-binding protein 2." /FTId=PRO_0000076686." |
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| <u>Region</u> | 107 /gene="Ireb2" /region_name="Conflict" /experiment="experimental evidence, no additional details recorded" /note="V -> M (in Ref. 1)." |
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ORIGIN

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181 sgelsrnsqt fssquentpv lcpfhlqpvp epetvlknqe vefgrnrerl qffkwssgaf
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481 aekqsdtvsv rydgseykls hgsvviaavi sctnnncnpsv mlaagllakk avetglrvkp
541 yirtsllspgs gmvthylsss gvlpylsklg feivgygcst cvgntaplse ailnavkqgd
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661 lhdipwsree vhqieehvi lsmfkalkek vemgnkrwns ldapdsvlfp wdvkstyirc
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